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10/766,628	01/28/2004	Debra L. Harp	FIREPLACE	3748

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EXAMINER

PRICE, CARL D

ART UNIT	PAPER NUMBER
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3749

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/766,628

Applicant(s)

HARP ET AL.

Examiner

CARL D. PRICE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### Response to Arguments

Applicant's arguments with respect to claims 1-6 and 8-20 have been considered but are moot in view of the new ground(s) of rejection.

The examiner disagrees with applicant argument that the prior art relied on by the examiner in the last office action fails to show the invention as set forth in the claims of the present application. In particular, applicant suggests the prior art does not have a “*light and image reflective material*” with a “*viewable surface having an angle of incidence and an angle of reflection which are both substantially equal as viewed by a viewer of the system*”.

As noted in the Examiner's office action applicants' own disclosure acknowledges that the basis law of mirrors dictates that “... when a ray of light reflects off a surface, the angle of incidence is equal to the angle of reflection.”.

“...The angle between the reflected ray and the normal is known as the angle of reflection. The law of reflection states that when a ray of light reflects off a surface, the angle of incidence is equal to the angle of reflection. When a person views an image reflected from the mirror, the light (or image) which travels along the line of sight to one's eye follows the law of reflection. In accordance with one embodiment of the present invention, the light or image reflective material is placed within the vertical surfaces A, B, C of a firebox to obtain optimized viewing of the fireflame through the laws of reflection.” (page 9, lines 4-12 of the present application)

Each of US003877802 (SHUMAKER), US004309142 (GREENSPAN) and US003942879 (PLEDGER) are now discussed in response to applicants' remarks and to provide

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support for the examiner's rejection of the claims. And, indeed to affirm applicants' own disclosure regarding the known principles, or laws, governing of reflection.

**US004309142 (GREENSPAN)** discloses (beginning column 10, line 19) the following:

(22) The nature of the planar reflectors which makes the above described operation of the display device 10 possible will now be described. In FIG. 5, a conventional planar reflector 90 is shown. Such conventional reflectors are well known and include mirrors as well as other highly polished surfaces. All conventional planar reflectors follow the well known optical law of reflection which, simply stated, is that the angle of incidence on a reflector is equal to the angle of reflection from the reflector.

**US003877802 (SHUMAKER)** discloses (beginning column 5, line 58) the following:

(22) ... This is shown diagrammically in FIGS. 1 and 2. There, the straight line path between the operator 42 and mirror 60 is identified by Roman Numeral II. The straight line path between the mirror 60 and a portion (A) of the digging edge 40 is identified by Roman Numeral III. Following the basic law of mirrors (the angle of incidence equals the angle of reflection) line II and line III will form the same angle with respect to the plane of the mirror. Thus, the operator 42 can see a selected portion of the digging edge of the bucket by viewing the mirror 60 through an aperture 64 in the spill wall 48 portion of the backwall 46. This is diagrammed in FIG. 5.

**US003942879 (PLEDGER)** discloses (beginning column 1, line 15) the following:

(3) Heretofore, the steering of a mirror to reflect and direct an image, beam, light ray, or other incident radiation hereinafter referred to as the "beam" has involved manually or mechanically positioning the mirror in a manner such that the mirror reflects the beam according too the law of mirror reflection, viz: the angle of incidence is equal to the angle of reflection. Accordingly, the angle between the incident reflected rays is twice the angle of incidence, and the normal line to the plane of the mirror bisects this angle. The task of precisely directing a reflected image or beam involves positioning the mirror such that the normal to the mirror bisects the subtended angle between the source of the beam and the desired position of the beam.

For the reasons set forth in the examiners rejection, and now further supported by **US003877802 (SHUMAKER), US004309142 (GREENSPAN) and US003942879**

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(PLEDGER), the examiner maintains the position that "... the since each reflective panel of US005469839 (KASULIS et al) displays an image to a viewer that is located within the vertical surfaces, the reflective panels of US005469839 (KASULIS et al) would necessarily and inherently have an angle of incidence and an angle of reflection which are both substantially equal as viewed by a viewer of the systems in the manner set forth in applicant's claims.

**GB2220060 (BUTTERFIELD)** and **US004121114 (HISER)** and **US004667607 (FLEMING)** are now discussed in response to applicants' remarks and to provide support for the examiner's rejection of the claims. That is, "In regard to claims 2 and 12, for example, the temperature resistant mirrored glass material of US005469839 (KASULIS et al) would necessarily be of the "tempered" glass type since non-tempered glass would not be capable of withstanding thermal expansion and contraction thereof due to thermal cycling of the system. Tempering being a well known process for stabilizing glassware when used in high temperature conditions."

**GB2220060 (BUTTERFIELD)** discloses (see page 8, line 8) the following:

"Sheet 17 is preferably made of heat-resistant glass ...".

**US004121114 (HISER)** (of record) discloses (see page 8, line 8) the following:

(23) The decorative aspect of the unit 10 of the present invention as well as improved heat transfer into the room in which the unit 10 is located is enhanced by a highly reflective mirrored fire wall insert 110 which is adapted to be affixed to the firewall 18. Since fire in the fire box 12 is partially set into the room, the mirrored insert provides a startling panorama of reflected and re-reflected images of the fire.

(24) The open front and sides of the fire box 12 are enclosed by a plurality of decorative transparent doors 112 which include a pair of doors on either side of the fire box and a pair of doors traversing the front of the fire box. **Each of the doors 112 comprises a transparent pane 114, which may be constructed as required of a suitable transparent material such as heat treated and/or tempered glass.**

**US004667607 (FLEMING)** discloses (column 5, beginning line 35; and column 7, beginning line 9) the following:

(13) In the preferred form of the invention, an inner face sheet 12 of the panel 10 is provided by a sheet of high temperature and thermal shock resistant material such as clear glass material (such as is known in the trade as "Vycor" brand 96% silica glass) which has a high temperature resistance to thermal shock. Another surface sheet 13 of the panel 10 is also preferably provided in a high temperature resistance material but which may have a thermal resistance somewhat less than the material forming the inner sheet 12, e.g. a material such as tempered glass. (column 5, beginning line 35)

(25) Referring now to FIG. 5, a further embodiment of the invention is provided whereby the reflectorization is shown to be provided as treatment particles or a screen matrix embedded in a portion of the inner sheet 12 such as during formation of the inner sheet 12. This is the preferred embodiment of the invention where reflectorization is embedded into the sheets forming the panel 10 however, in an alternative embodiment of the invention, the reflectorization 14 can also be provided in the sheet 13.

(26) While reflectorization is described in this form of the invention as being in the form of a substantially mirrored surface using materials such as chromium, nickel, aluminum or metal alloy or oxide treatments, it will be appreciated that in alternative forms of the invention. other reflectorization materials may be utilized such as those where the proportion of the incident radiant heat reflected varies in respect of certain radiant heat wavelengths to enable selective reflection of radiant heat back into the cavity 7; e.g. materials such as particles, screens, sheets, films, layers and the like having reflective properties.

For the reasons set forth in the examiners rejection, and now further supported by **GB2220060 (BUTTERFIELD)**, **US004121114 (HISER)** and **US004667607 (FLEMING)**, the examiner maintains the position that the temperature resistant mirrored glass material of **US005469839 (KASULIS et al)** would necessarily be of the "tempered" glass type since non-tempered glass would not be capable of withstanding thermal expansion and contraction thereof due to thermal cycling of the system. Tempering being a well known process for stabilizing glassware when used in high temperature conditions.

**Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1-6 and 10-20: Rejected under 35 U.S.C. 102(b)**

Claims 1-6 and 10-20 are rejected under 35 U.S.C. 102(b) as being anticipated by US005469839 (KASULIS et al)(of record).

With regard to claims 1-6 and 10-20, the recitations “A firelight” and “for use within a fireplace” have not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Also, with regard to claims 1-6 and 10-20, the phrase “measured to substantially fit within, and couple to, one or more interior surfaces of the fireplace” is deemed a recitation of intended use and as such fails to impart any a positive structural limitation(s) which would distinguish the claimed invention over the prior art of record. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as

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compared to the prior art. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963).

**US005469839 (KASULIS et al)** shows and discloses a firelight reflective system for use within a fireplace comprising:

- at least one high temperature mirrored glass light or image reflective material having a viewable surface and a coupling surface, the viewable surface having an angle of incidence and an angle of reflection which are both substantially equal as viewed by a viewer of the systems the system measured to substantially fit within, and couple to, one or more interior surfaces of the fireplace; and
- coupling surfaces (for example, 60, 90).

**US005469839 (KASULIS et al)** discloses the following (see column 5, lines 58- column 6, line 8):

“(10) In the embodiment shown in FIGS. 8 and 9, the reflector assembly 74 is fabricated of a plurality of separate components. Such components include a vertical reflector 76 positioned at the rear of the fireplace above that is an angled reflector 78. Such reflectors have downturned edges 80 with apertures 82 for coupling with additional component elements and the interior faces of the side walls of the fireplace.

(11) The next adjacent components are the side reflectors 86. Two similarly shaped side reflectors are utilized. Such reflectors are rectangular in configuration except at one interior corner edge 88 wherein an angle is formed to accommodate the angled reflector 78 at the back of the fireplace. In addition, apertures 90 are formed in the side plates for coupling with the interior side spaces of the fireplace as well as the apertures 82 in the edges of the back and angled reflector plates. FIG. 9 is an enlarged perspective showing of one of the



apertures 90 in plate 86 as illustrative of the way coupling may be effected through screws 92.”

With regard to claims 1-6 and 10-20, applicant’s attention is directed to Figure 8 of the prior art reference **US005469839 (KASULIS et al)**(of record) which clearly illustrates a glass mirrored material having both image and light reflective characteristics where, for example, an image of a burning log set (94) and an image of the flames (at 78) are located within the vertical surfaces (76, 78, 86) and presented by the reflective material to a viewer at least in a location oriented according to the perspective represented in figure 8 of **US005469839 (KASULIS et al)**.

In addition, the background information presented by applicant is noted. At page 9, lines 4-12 of the present application applicant states:

*“...The angle between the reflected ray and the normal is known as the angle of reflection. The law of reflection states that when a ray of light reflects off a surface, the angle of incidence is equal to the angle of reflection. When a person views an image reflected from the mirror, the light (or image) which travels along the line of sight to one's eye follows the law of reflection. In accordance with one embodiment of the present invention, the light or image reflective material is placed within the vertical surfaces A, B, C of a firebox to obtain optimized viewing of the fireflame through the laws of reflection.”*

Thus, since each reflective panel of **US005469839 (KASULIS et al)** displays an image to a viewer that is located within the vertical surfaces, the reflective panels of **US005469839 (KASULIS et al)** would necessarily and inherently have an angle of incidence and an angle of reflection which are both substantially equal as viewed by a viewer of the systems in the manner set forth in applicant’s claims. In regard to claims 2 and 12, for example, the temperature resistant mirrored glass material of **US005469839 (KASULIS et al)** would necessarily be of the “tempered” glass type since non-tempered glass would not be capable of withstanding thermal

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expansion and contraction thereof due to thermal cycling of the system. Tempering being a well known process for stabilizing glassware when used in high temperature conditions.

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Claims 8 and 9: Rejected under 35 U.S.C. 103(a)**

Claims 8 and 9 rejected under 35 U.S.C. 103(a) as being unpatentable over  
**US005469839 (KASULIS et al)** in view of **JP 2003-79507**.

**US005469839 (KASULIS et al)** shows and discloses the invention substantially as set forth in the claims with possible exception to:

- a heat resistant adhesive being adapted to substantially permanently couple the coupling surface to the interior surfaces of the fireplace.

**JP 2003-79507 teaches**, form the same flame display field of endeavor as **US005469839 (KASULIS et al)** coupling mirrors to the interior surface of a chamber body.

In regard to claims 8 and 9, for the purpose substantially permanently coupling the mirror to the fireplace it would have been obvious to a person having ordinary skill in the art to apply and adhesive, have the necessary heat-resistant properties, to the surface to the interior surfaces of the fireplace, in view of the teaching of **JP 2003-79507**.

### **Conclusion**

See the attached USPTO form 892 for prior art made of record and not relied upon which is considered pertinent to applicant's disclosure.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

**USPTO CUSTOMER CONTACT INFORMATION**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CARL D. PRICE whose telephone number is (571) 272-4880. The examiner can normally be reached on Monday through Friday between 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Monica S. Carter can be reached on (571) 272-4475. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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